



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/729,806	12/05/2000	Rolf Gunter Erich Stegelmann	9223	9261

26890 7590 08/11/2005

JAMES M. STOVER  
NCR CORPORATION  
1700 SOUTH PATTERSON BLVD, WHQ4  
DAYTON, OH 45479

EXAMINER

RIMELL, SAMUEL G

ART UNIT PAPER NUMBER

2165

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/729,806

Applicant(s)

STEGELMANN, ROLF GUNTER  
ERICH

Examiner

Sam Rimell

Art Unit

2165

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7, 10-21, 24-33 and 35-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7, 10-19, 28, 30, 31, 33, 35-38 and 43-45 is/are allowed.
- 6) ☒ Claim(s) 20, 26, 27, 29 and 32 is/are rejected.
- 7) ☒ Claim(s) 21, 24-25, 39-42 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

  
SAM RIMELL  
PRIMARY EXAMINER

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

Art Unit: 2175

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 20, 26, 27 and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Lomet (U.S. Patent 5,933,838).

Claim 20: FIG. 11 illustrates the storage of objects (128 and 130) in the rows (124) and (126) respectively. In response to processing operations, such as logging operations, a state identifier (SID) is assigned to each object (128, 130). The state identifiers are indicators of a sequence in the log (col. 33, lines 56-60). Thus, a lower SID number represents that a transaction on the object occurred before the transaction on the object having the higher SID. Accordingly, the object with the lower SID is the “before” image and the object with the higher SID is the “after” image. The objects are stored in an object table.

As seen in FIG. 12, the objects are both readable under the condition of a read request. The claim does not specify what the “conditions” actually are, so the conditions can be read requests.

Claim 26: The identification of a state identifier to the second row (128) is considered to be a marking of that row.

Claim 27: Claim 27 presents two options, only one of which limits the claims. The deletion of rows is described at col. 33, line 28 and is described as the flushing of data from rows of the table. The flushing can occur in response to an abort condition, such as after the abort condition has occurred and recovery has been completed.

Claim 32: Each of the data in the object table (FIG. 11) is stored in rows. The table is a relational table by reason that it has at least one row and at least one column.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lomet (U.S. Patent 5,933,838) in view of Klein et al. (U.S. Patent 6,349,310).

Claim 29: The data structure is the object table. One portion of the object table (122) is shown in FIG. 11. The portion of the object table (122) has individual rows such as (124) and (126) that contain data objects with state identifiers (SID). A lower state identifier indicates a “before” image and a higher state identifier indicates an “after” image.

Lomet differs from the claims in that it does not discuss structured queries such as those deploying structured query language (SQL). Klein et al. teaches that data objects within database tables (FIG. 2, reference 56) can be queried (read and retrieved) using SQL statements (FIG. 1).

It would have been obvious to one of ordinary skill in the art to modify Lomet to permit SQL queries on the readable data within its database tables as is very well known in the art and taught specifically by Klein et al. so as to permit access to database information.

Claims 21, 24-25 and 39-42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 1-7, 10-19, 28, 30, 31, 33, 35-38 and 43-45 are allowed.

Art Unit: 2175

Remarks

Applicant's arguments and amendments have been considered. With respect to independent claim 20, applicant's arguments are essentially a re-iteration of the limitations of claim 20. Examiner maintains that all the limitations of claim 20 (see discussion above) are met by the Lomet reference. With respect to independent claim 29, examiner agrees that the feature of SQL querying is not taught by the Lomet reference, however, it is taught in FIGS. 1-2 of Klein et al.

Claims 1-7, 10-19, 28, 30, 31, 33, 35-38 and 43-45 are indicated as being allowed. Claims 21, 24, 25 and 39-42 are indicated as containing allowable subject matter but are otherwise dependent on rejected claims.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2175

Any inquiry concerning this communication should be directed to Sam Rimell at telephone number (571) 272-4084.

A handwritten signature in black ink, appearing to read 'Sam Rimell', is positioned above the printed name.

Sam Rimell  
Primary Examiner  
Art Unit 2165